

## MINIMUM CRITERIA DETERMINATION CHECKLIST

The following questions provide direction in determining when the Department is required to prepare environmental documents for state-funded construction and maintenance activities. Answer questions for Parts A through C by checking either “Yes” or “No”. Complete Part D of the checklist when Minimum Criteria Rule categories #8, 12(i) or #15 are used.

**TIP Project No.:** BR-0009

**State Project No.:** 67009.1.1

**Project Location:** Bridge #100079 on NC 9 over the Broad River in Buncombe County (Division 13).

**Project Description:** The North Carolina Department of Transportation (NCDOT) plans to replace Bridge #100079 on NC 9 over the Broad River (TIP # BR-0009) in Buncombe County (Division 13).

The total project length is approximately 623 feet, with an overall existing right-of-way width of 28 feet. Bridge #100079 is currently 43 feet long. The replacement bridge will be a single-span cored slab bridge structure.

Additional right-of-way and easement is required. NC 9 will provide two 11-foot travel lanes. The roadway will be designed as a Collector using Regional Tier Guidelines with a 30 mile per hour design speed.

The bridge will be replaced in-place using an on-site detour.

**Anticipated Permit or Consultation Requirements:** None.

### **Special Project Information:**

Traffic. ADT 2020 = 620 VPD. ADT 2040 = 1,100 VPD. STIP BR-0009, as depicted in preliminary plans, will meet 2040 traffic needs.

Crash Data. There were five crashes reported in the vicinity of Bridge #100079 for the period from 08/01/2008 to 07/31/2018. No fatalities occurred, three crashes included injuries, and two crashes had property damage only. Three crashes involved motorcycles and four involved speeds of 45 mph or higher.

Pedestrian and Bicycle Accommodations. There are no existing bicycle or pedestrian facilities along NC 9. Paved shoulders, 4' in width, and a two-bar metal railing, 54" in height, will be incorporated for bicycle safety.

On-Site Detour. An alternating single-lane detour with signal control will be used for the on-site detour.

Cost. There are no utility costs associated with this project.

**PART A: MINIMUM CRITERIA**

***Item 1 to be completed by the Engineer.***

- 1. Is the proposed project listed as a type and class of activity allowed under the Minimum Criteria Rule in which environmental documentation is not required?

**YES**

**NO**

If the answer to number 1 is “no”, then the project does not qualify as a minimum criteria project. A state environmental assessment is required.

**If yes, under which category?**

#9 - Reconstruction of existing crossroad or railroad separations and existing stream crossings, including, but not limited to, pipes, culverts, and bridges;

If either category #8, #12(i) or #15 is used complete Part D of this checklist.

**PART B: MINIMUM CRITERIA EXCEPTIONS**

***Items 2 – 4 to be completed by the Engineer.***

- 2. Could the proposed activity cause significant changes in land use concentrations that would be expected to create adverse air quality impacts?
- 3. Will the proposed activity have secondary impacts or cumulative impacts that may result in a significant adverse impact to human health or the environment?
- 4. Is the proposed activity of such an unusual nature or does the proposed activity have such widespread implications, that an uncommon concern for its environmental effects has been expressed to the Department?

**YES**

**NO**






***Item 5-8 to be completed by Division Environmental Officer.***

- 5. Does the proposed activity have a significant adverse effect on wetlands; surface waters such as rivers, streams, and estuaries; parklands; prime or unique agricultural lands; or areas of recognized scenic, recreational, archaeological, or historical value?
- 6. Will the proposed activity endanger the existence of a species on the Department of Interior's threatened and endangered species list?
- 7. Could the proposed activity cause significant changes in land use

concentrations that would be expected to create adverse water quality or ground water impacts?

- |   | <b>YES</b>               | <b>NO</b>                           |
|---|--------------------------|-------------------------------------|
| 8. Is the proposed activity expected to have a significant adverse effect on long-term recreational benefits or shellfish, finfish, wildlife, or their natural habitats | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

If any questions 2 through 8 are answered “yes”, the proposed project may not qualify as a Minimum Criteria project. A state environmental assessment (EA) may be required. For assistance, contact:

Manager, Environmental Analysis Unit  
 1598 Mail Service Center  
 Raleigh, NC 27699-1598  
 (919) 707 – 6000  
 Fax: (919) 212-5785

**PART C: COMPLIANCE WITH STATE AND FEDERAL REGULATIONS**

- | <i>Items 9- 12 to be completed by Division Environmental Officer.</i>  | <b>YES</b>               | <b>NO</b>                           |
|--|--------------------------|-------------------------------------|
| 9. Is a federally protected threatened or endangered species, or its habitat, likely to be impacted by the proposed action?  | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 10. Does the action require the placement of temporary or permanent fill in waters of the United States?   | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 11. Does the project require the placement of a significant amount of fill in high quality or relatively rare wetland ecosystems, such as mountain bogs or pine savannahs? | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 12. Is the proposed action located in an Area of Environmental Concern, as defined in the coastal Area Management Act?   | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

***Items 13 – 15 to be completed by the Engineer.***

- |  |                          |                                     |
|--|--------------------------|-------------------------------------|
| 13. Does the project require stream relocation or channel changes? | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
|--|--------------------------|-------------------------------------|

Cultural Resources

- |   |                          |                                     |
|---|--------------------------|-------------------------------------|
| 14. Will the project have an “effect” on a property or site listed on the National Register of Historic Places?                 | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 15. Will the proposed action require acquisition of additional right of way from publicly owned parkland or recreational areas? | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Questions in Part “C” are designed to assist the Engineer and the Division Environmental Officer in determining whether a permit or consultation with a state or federal resource agency may be required. If any questions in Part “C” are answered “yes”, follow the appropriate permitting procedures prior to beginning project construction.

**PART D:( To be completed when either category #8, 12(i) or #15 of the rules are used.)**

***Items 16- 22 to be completed by Division Environmental Officer.***

- 16. Project length: \_\_\_\_\_
- 17. Right of Way width: \_\_\_\_\_
- 18. Project completion date: \_\_\_\_\_
- 19. Total acres of newly disturbed ground surface: \_\_\_\_\_
- 20. Total acres of wetland impacts: \_\_\_\_\_
- 21. Total linear feet of stream impacts: \_\_\_\_\_
- 22. Project purpose: \_\_\_\_\_

If Part D of the checklist is completed, send a copy of the entire checklist document to:

Don G. Lee  
 State Roadside Environmental Engineer  
 Mail Service Center 1557  
 Raleigh, NC 27699-1557  
 (919) 707-2920  
 Fax (919) 715-2554  
 Email: dlee@ncdot.gov

Reviewed by: DocuSigned by:  
Kevin Fischer \_\_\_\_\_ Date: 1/9/2019

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 Kevin Fischer, PE, Structures  
 Management Unit, NCDOT

 \_\_\_\_\_ Date: 1/4/2019

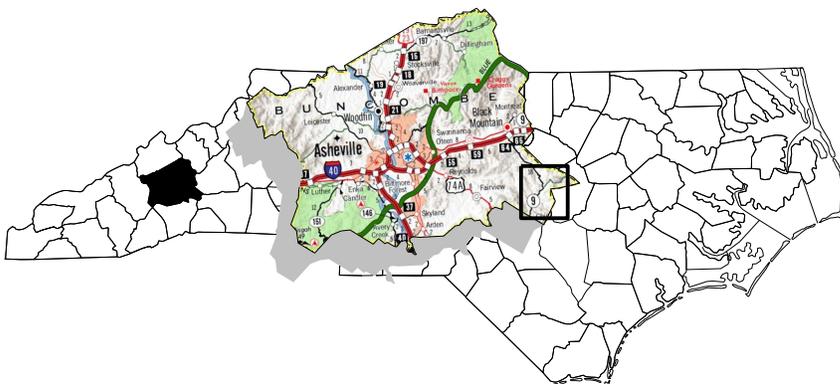
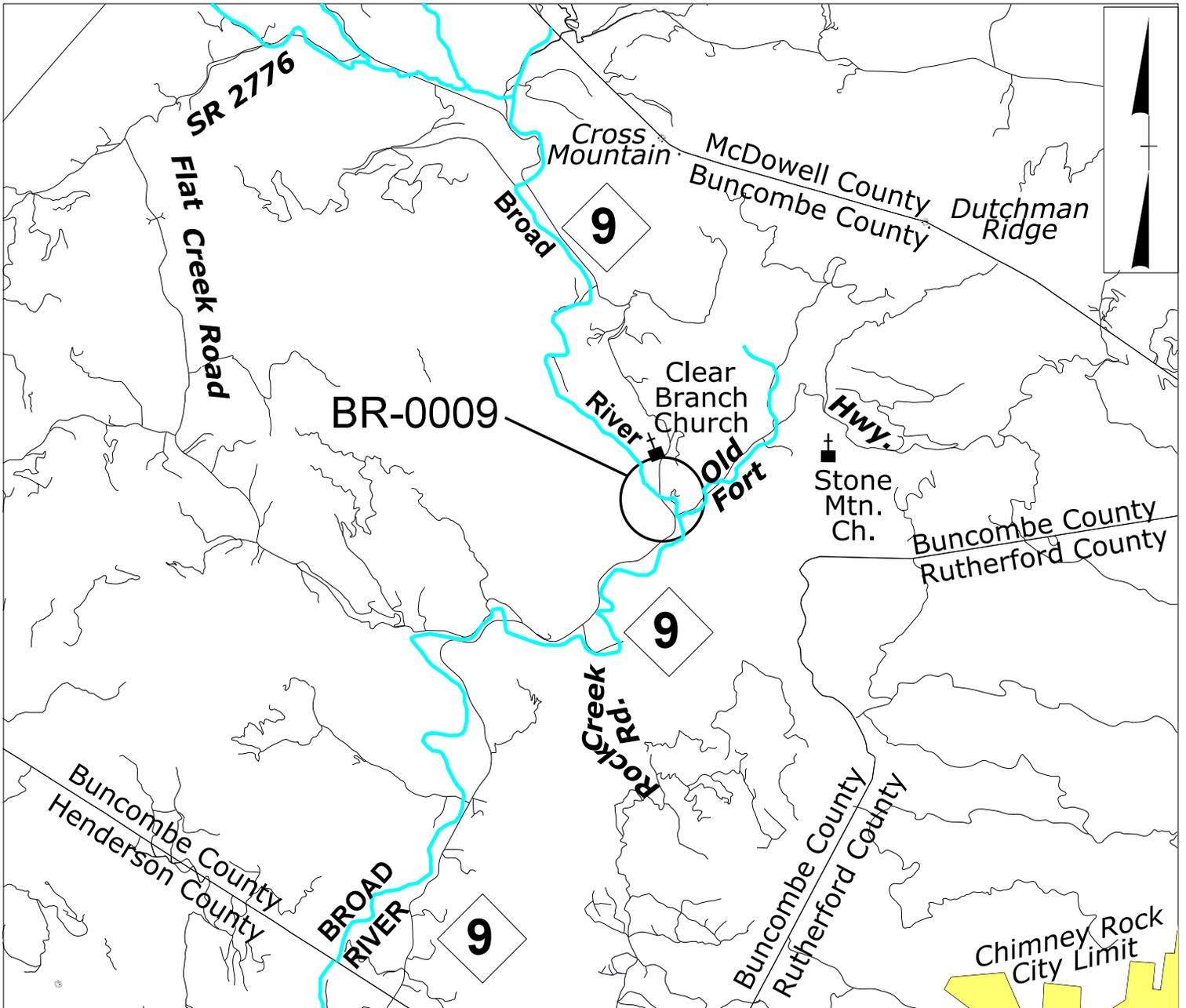
Scott Shifflett, Environmental Project  
 Manager, ATCS

H. Project Commitments

**Buncombe County**  
**Replacement of Bridge #100079 on NC 9 over the Broad River**  
**WBS No. 67009.1.1**  
**TIP No. BR-0009**

**Trout Moratorium.** The U.S. Army Corps of Engineers (USACE) and the North Carolina Department of Environmental Quality (NCDEQ) have identified the section of Broad River within the project study area as within a designated trout watershed. Therefore, a mandatory trout moratorium is required for any in-stream work from October 15 to April 15 unless prior written approval is obtained from the North Carolina Wildlife Resources Commission (NCWRC). However, the project is not proposing any direct impacts to the Broad River, and proper erosion and sediment control will be established to protect the stream during construction.

**Northern Long-Eared Bat (NLEB).** Construction activities for this project will not take place until Endangered Species Act Compliance is satisfied for NLEB.



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BUNCOMBE COUNTY  
REPLACE BRIDGE NO. 100079  
OVER BROAD RIVER ON NC 9  
STIP # BR-0009  
WBS Element No. 67009.1.1

17-12-0044



## HISTORIC ARCHITECTURE AND LANDSCAPES NO HISTORIC PROPERTIES PRESENT OR AFFECTED FORM

This form only pertains to Historic Architecture and Landscapes for this project. It is not valid for Archaeological Resources. You must consult separately with the Archaeology Group.

### PROJECT INFORMATION

<b>Project No:</b>	BR-0009	<b>County:</b>	Buncombe
<b>WBS No.:</b>	67009.1.1	<b>Document Type:</b>	CE
<b>Fed. Aid No:</b>		<b>Funding:</b>	<input type="checkbox"/> State <input checked="" type="checkbox"/> Federal
<b>Federal Permit(s):</b>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<b>Permit Type(s):</b>	USACE
<b><u>Project Description:</u></b> Replace Bridge No. 79 over Broad River.			

### SUMMARY OF HISTORIC ARCHITECTURE AND LANDSCAPES REVIEW

- There are no National Register-listed or Study Listed properties within the project's area of potential effects.
- There are no properties less than fifty years old which are considered to meet Criteria Consideration G within the project's area of potential effects.
- There are no properties within the project's area of potential effects.
- There are properties over fifty years old within the area of potential effects, but they do not meet the criteria for listing on the National Register.
- There are no historic properties present or affected by this project. (Attach any notes or documents as needed.)

**Date of field visit:** April 11, 2018

#### **Description of review activities, results, and conclusions:**

Review of HPO quad maps, relevant background reports, historic designations roster, and indexes was undertaken on January 17, 2018. Based on this review there are no NR, DE, LL, SS, or SL in the project area; however, number of structures over 50 years old were revealed. An NCDOT Architectural Historian conducted a site visit on April 11, 2018 and determined that none of these properties rise to the level of National Register eligibility due to their lack of architectural integrity and significance. No historic properties will be affected by this bridge replacement.

### SUPPORT DOCUMENTATION

- Map(s)     Previous Survey Info.     Photos     Correspondence     Design Plans

**FINDING BY NCDOT ARCHITECTURAL HISTORIAN**

Historic Architecture and Landscapes – **NO HISTORIC PROPERTIES PRESENT OR AFFECTED**

*Shelby Reap*  
NCDOT Architectural Historian

*April 12, 2018*  
Date



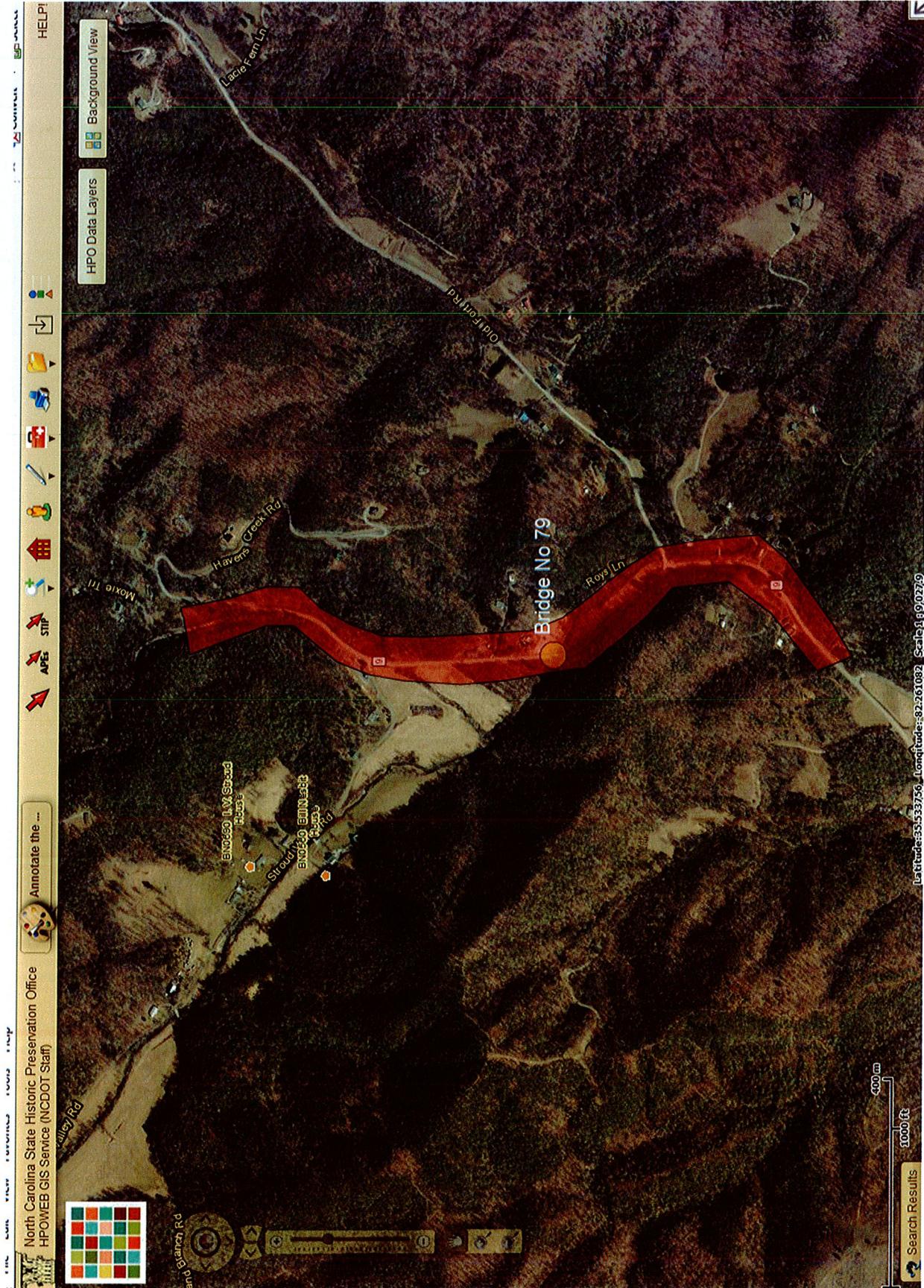
2415 NC 9 c. 1956

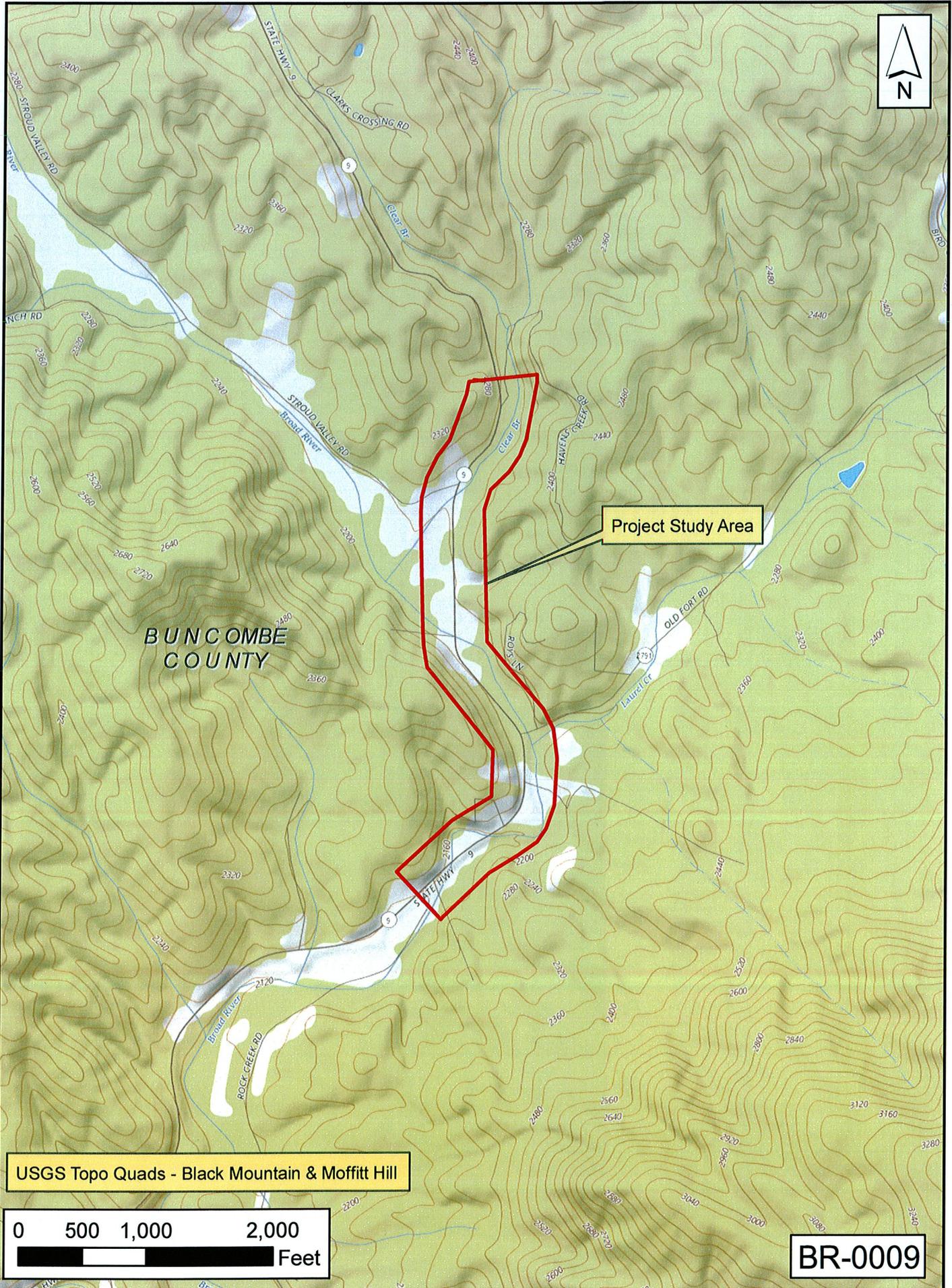


2425 NC 9 c.1945

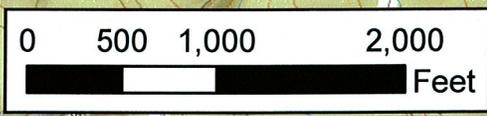


2521 NC 9 c.1960





USGS Topo Quads - Black Mountain & Moffitt Hill



BR-0009



**NO NATIONAL REGISTER OF HISTORIC PLACES  
ELIGIBLE OR LISTED ARCHAEOLOGICAL SITES  
AFFECTED FORM**



This form only pertains to ARCHAEOLOGICAL RESOURCES for this project. It is not valid for Historic Architecture and Landscapes. You must consult separately with the Historic Architecture and Landscapes Group.

### PROJECT INFORMATION

**Project No:** BR-0009                      **County:** Buncombe  
**WBS No:** 67009.1.1                      **Document:** Minimum Criteria  
**F.A. No:** na                                      **Funding:**  State       Federal  
**Federal Permit Required?**       Yes       No      **Permit Type:** NWP

**Project Description:**

*The project calls for the replacement of Bridge No. 79 on NC 9 over the Broad River in Buncombe County. The Archaeological Area of Potential Effects (APE) for the project is defined as a 4,750-foot (1,447.80-m) long corridor running 2,260 feet (688.85 m) north and 2,490 feet (758.95 m) south along NC 9 from the center of Bridge No. 79. The corridor is approximately 500 feet (152.40 m) wide extending 250 feet (76.20 m) on either side of the road from its present centerline.*

### SUMMARY OF ARCHAEOLOGICAL FINDINGS

***The North Carolina Department of Transportation (NCDOT) Archaeology Group reviewed the subject project and determined:***

- There are no National Register listed ARCHAEOLOGICAL SITES within the project's area of potential effects. (Attach any notes or documents as needed)
- There are National Register listed ARCHAEOLOGICAL SITES within the project's area of potential effects. (Attach any notes or documents as needed).
- Subsurface investigations did not reveal the presence of any archaeological resources.
- Subsurface investigations did not reveal the presence of any archaeological resources considered eligible for the National Register.
- All identified archaeological sites located within the APE have been considered and all compliance for archaeological resources with Section 106 of the National Historic Preservation Act and GS 121-12(a) has been completed for this project.

**RECOMMENDATION**

New South Associates, Inc. conducted an intensive archaeological survey and evaluation for proposed replacement of Bridge No. 79 in Buncombe County from May 7 to 11, 2018 under the direction of James Stewart and the supervision of Shawn Patch (see Figures 1–3). During the course of the survey, four archaeological resources (31BN1034, 31BN1035, 31BN1036, and 31BN1037) were identified. Site 31BN1034, 31BN1035, and 31BN1037 are recommended as not eligible for the National Register of Historic Places (NRHP) under Criteria A, B, C, and D and require no further archaeological investigations. The remaining site, 31BN1036, is a Middle Woodland artifact scatter with an undisturbed A-horizon. It retains integrity and has a high potential for the presence of intact features. Based on the results of the investigation, site 31BN1036 is recommended eligible for the NRHP under Criterion D, as the site could yield data significant to Middle Woodland period occupations in the Broad River drainage basin. Site 31BN1036 is recommended for avoidance. If the site cannot be avoided, then further archaeological consultation and site mitigation is required. Current design plans for the bridge replacement project have been review, and site 31BN1036 will not be impacted by construction activities (see Appendix A). I concur with the recommendation.

**SUPPORT DOCUMENTATION**

See attached:  Map(s)     Previous Survey Info     Photos     Correspondence

Other: **Cultural Review**

Signed:



**C. Damon Jones**  
**NCDOT ARCHAEOLOGIST**

11/13/18

**Date**

***Brief description of review activities, results of review, and conclusions:***

Bridge No. 79 is located south of Black Mountain in Buncombe County, North Carolina. The project area is plotted along the eastern edge of the Black Mountain USGS 7.5' topographic quadrangle and the western edge of the Moffitt Hill quadrangle (Figure 1).

NC 9 and Bridge No. 79 are situated roughly north to south over the Broad River. The river drains south and includes two tributaries within the APE. NC 9 crosses Clear Branch approximately 1,000 feet (304.80 m) north of the bridge, while the confluence with Laurel Creek is 1,000 feet to the south on the east side of NC 9. For much of the southern half of the APE, the Broad River runs alongside the eastern edge of NC 9. Landforms consist of the floodplain adjacent to the river, stream terraces, foot slopes, and steep hillsides. Grassy meadows and hay fields are found on the floodplain and terraces, while forested properties are mostly along the hillsides. Residential properties are scattered throughout as well. Ground disturbance appears minimal.

An NCDOT archaeologist conducted a map review and site file search at the Office of State Archaeology (OSA) on January 11, 2018. No previously recorded archaeological sites are within the APE or a mile of the project area. The 1938 highway map for the county is the first to suggest a modern alignment to NC 9 with a bridge at the current project area (NCSHPWC 1938). The map also shows two structures near the intersection with Old Fort Road. According to the North Carolina State Historic Preservation Office online database (HPOWEB 2018), there are no recorded historical architectural resources within the APE that may yield intact archaeological deposits. A review of United States Department of Agriculture (USDA) soil data for Buncombe County identifies well-drained soils and level terrain within the APE (Hudson 2009). These areas have a high potential for the presence of archaeological remains.

The NCDOT preliminary background investigation recommended an archaeological survey. The project area is minimally disturbed with level terrain and dry soils (Figure 2). These areas are suitable for prehistoric occupations. Subsurface testing was needed to identify any significant archaeological resources that might be impacted by the proposed replacement of Bridge No. 79 in Buncombe County.

New South Associates, Inc. (New South) conducted an intensive survey of the Bridge No. 79 APE between May 7 and May 11, 2018. The survey included a visual inspection of the entire APE and 15-meter-interval shovel testing in areas with moderate or high potential for the presence of archaeological remains. Shovel test locations were pre-plotted based on USDA soil data and LiDAR-derived slope data (Figure 3). Technicians evaluated all test locations during the survey. Suitable test positions were excavated into culturally sterile subsoils, impenetrable substrate, or the water table. Test locations were not excavated in visibly disturbed areas or on excessively steep side slopes. All shovel tests measured 30-centimeters in diameter, and soils were screened through 0.25-inch hardware cloth. Shovel testing results were documented with a Memento data collection application, and the locations of positive shovel tests and features were recorded with a sub-meter precision GPS system. New South examined 392 pre-plotted test locations in the Bridge 79 APE. Technicians excavated 205 test locations, with 10 yielding artifacts. The remaining 187 test locations were not excavated due to the presence of excessively steep slopes.

### 31BN1034

Site 31BN1034 was identified through the excavation of Shovel Tests 621 and 622, approximately 90 meters north of the NC 9 intersection with Old Fort Road (see Figure 1). Hay currently grows across this floodplain field (Figure 4), and the landowner stated that his family once used the field for cattle pasture. This artifact deposit was identified as site 31BN1034 and evaluated with additional close-interval shovel tests and one test unit (Test Unit 3).

Six 7.5-meter interval shovel tests were excavated during the site delineation (Figures 5 and 6). Although Shovel Tests 621 and 622 yielded artifacts, none of the surrounding tests were productive, and boundaries of 10x23 meters were established for the site.

New South collected 13 artifacts from site 31BN1034. Shovel Test 621 produced a single temporally non-diagnostic quartz flake/flake fragment from zero to 40 centimeters below the ground surface, and Shovel Test 622 produced 12 precontact ceramics between 40-80 centimeters below the ground surface. These sherds were all fine sand-tempered Plain body sherds attributed to the same vessel. Fine sand-tempering in Western North Carolina is an attribute associated with the Connestee ceramic series and suggests a Middle Woodland date range for the occupation (Keel 1976). Although shovel testing produced few artifacts, a single 1x1-meter test unit (Test Unit 3) was opened to determine if the site contained any significant Middle Woodland period artifact deposits or the potential for intact features.

Test Unit 3 was placed near the Shovel Test 622 ceramic artifact concentration, at N502 E498. Four 10-centimeter levels were excavated from this 1x1-meter test unit (Figure 7). All soils were screened through 0.25-inch hardware cloth. Levels 1 (0-10 cmbs), 2 (10-20 cmbs), and 3 (20-30 cmbs) contained a dark yellowish brown (10YR 4/4) silty loam plow zone (Stratum I). Level 4 (30-40 cmbs) was excavated into Stratum II. This stratum contained dark yellowish brown (10YR 3/4) clayey loam. After controlled excavation of the first 40 centimeters did not locate any artifacts, succeeding soils were removed in natural strata to a final depth of 120 centimeters below the ground surface, where excavators encountered an alluvial deposit of coarse yellowish brown (10YR 5/4) micaceous sand (Stratum III). No artifacts, features, or soil anomalies were encountered during the excavation of the succeeding strata.

Shovel testing and test unit excavation show that site 31BN1034 represents a light-density precontact, possibly Middle Woodland, artifact deposit. The concentration of ceramics collected from Shovel Test 622 indicate a pot-bust or short-term occupation that was unlikely to generate features. The continued excavation of Test Unit 3 into sterile soil shows that the site rests on alluvial strata with low potential for deeply buried cultural deposits. These soils and the small number of artifacts recovered from site 31BN1034 indicate a low potential for the site to provide contributions to Middle Woodland period research. Site 31BN1034 is recommended not eligible for the National Register of Historic Places (NRHP) under Criterion D. Because the precontact artifact scatter cannot be associated with any broad historical patterns or notable people, the site is also recommended not eligible for the NRHP under Criteria A, B, and C. No further work is recommended for site 31BN1034.

### 31BN1035

This historic house site includes a standing fieldstone chimney located directly across from the Old Fort Road intersection with NC 9 and a standing structure, located 10 meters south of the chimney (see Figure 1). A white pine canopy and periwinkle ground cover extended over this artificially graded area (Figure 8), and tree trunks were piled across a 20x10-meter area to the north of the chimney. The adjacent landowner identified the standing structure as a produce stand constructed during the 1970s. Given these dates, the structure was excluded from the archaeological assessment.

The chimney measured 80x160 centimeters in plan and was constructed of stone and mortar (Figure 9). The east-facing fireplace included an elevated stone hearth. A horizontal piece of standing seam metal roofing was embedded in the upper chimney, and mortar present on the interior (eastern) chimney face. No foundation or pier supports were located during the site evaluation. The position of the chimney suggests the house extended into the NC 9 right of way, and it is highly probable that standing structural elements in the area were demolished during road construction. Though survey testing did not locate any artifacts near the chimney, five 7.5-meter interval shovel tests were excavated during the site evaluation (Figures 10 and 11). These tests revealed 30 centimeters of brown (7.5YR 3/4) silty clayey loam overlying reddish yellow (7.5YR 7/8) silty clay subsoil. One test, at N507.5 E500, produced seven historic artifacts from a depth of 0-30 centimeters below the ground surface. This test location and the chimney location indicate the site measures 15 meters in diameter.

The positive shovel test produced four industrial porcelain fragments, one wood screw, one wire nail, and one burned glass fragment. Wood screws, standing seam metal panels, and wire nails have been manufactured since the mid-nineteenth century (Miller 2000; Nelson 1968; Orser et al. 1987), and the 1938 North Carolina State Highway Map for Buncombe County places an occupied house at the approximate site location. Later highway and topographic maps do not show this structure, which suggests the house was abandoned by the mid-twentieth century.

Site 31BN1035 encompasses a mid-nineteenth- to mid-twentieth-century house site with a standing chimney. The small number of recovered artifacts indicates the site will not provide significant research contributions. The proximity of NC 9 and artificial condition of the surrounding terrain suggests the site was disturbed by road construction activity. Shovel testing results indicate the site lacks integrity. Site 31BN1035 is recommended not eligible for the NRHP under Criterion D. Background research did not identify any associations between this house site and broad historical patterns or locally significant individuals. The chimney is not intact and does not represent the works of a master or high design ideals. New South, therefore, recommends site 31BN1035 not eligible for the NRHP under Criteria A, B, and C. No further work is recommended.

### 31BN1036

Shovel testing identified this precontact artifact scatter 85 meters southwest of the NC 9 intersection with Stroud Valley Road (see Figure 1). The site extends across a ridge nose and the adjoining Clear Branch /Broad River floodplain (Figure 12). The creek joins the Broad River 90 meters southwest of the site. Hay covered the ridge and floodplain during the survey. An abandoned poultry barn was also present on the eastern edge of the ridge (Figure 13). Mr. Larry

Stroud, the landowner, stated that the field was formerly used for cattle grazing and that the poultry barn was constructed in the 1950s and abandoned soon after that.

Thirty-seven 15-meter- and 7.5-meter-interval shovel tests were excavated during the survey and site evaluation (Figures 13 and 14). These tests revealed two principal soil profiles. Soils encountered in the northern half of the site included 30-40 centimeters of strong brown (7.5YR 4/6) silty clay overlying dark brown (7.5YR 3/2) clay and brown (7.5YR 4/4) clay subsoil. Shovel tests near Clear Branch uncovered 20-40 centimeters of brown (10YR 4/3) loamy silt overlying yellowish brown (10YR 5/4) sand. These soil textures and the proximity to the stream attest to the presence of alluvial activity in this area.

There were 13 positive tests located within site 31BN1036, indicating the artifact deposit measures 59x126 meters and extends to a depth of 74 centimeters below ground surface. There were 38 precontact artifacts and unmodified stones collected from site 31BN1036 shovel tests, including seven ceramic fragments, 23 lithic artifacts, and six unmodified stones (Table 1). The fragments had fine or medium sand-tempered pastes with plain, cord-marked, fabric-impressed, or eroded surface treatments. Though the surface treatments were not definitively identified to a precontact ceramic series, paste characteristics resemble the Middle Woodland period Connestee ceramic type (Keel 1976). Thermally altered rock was also identified at the N455 E500 shovel test, but not collected.

*Table 1. Artifacts Collected from Site 31BN1036 Shovel Tests*

Shovel Test Number/Coordinate	Artifact Type	Count
24 (N500 E500)	Fine Sand Tempered Eroded Decorated Body Sherd	1
25 (N485 E500)	Coarse Sand Tempered Plain Body Sherd	1
	Quartzite Flake	2
	Quartzite Flake-Fragment	1
26 (N470 E500)	Medium Sand Tempered Cord Marked Body Sherd	1
	Quartzite Angular Debris	1
31 (N395 E500)	Ridge and Valley Chert Flake	1
122 (N410 E515)	Coarse Sand Tempered Eroded Body Sherd	1
209 (N470 E530)	Quartzite Angular Debris	1
	Ridge and Valley Chert Flake	1
	Unmodified Stone	2
210 (N455 E530)	Fine Sand Tempered Fabric Impressed Body Sherd	1
	Quartzite Angular Debris	1
	Quartzite Flake-Fragment	1
	Unmodified Stone	6
212 (N425 E537.5)	Quartz Flake-Fragment	1
305 (N440 E545)	Ridge and Valley Chert Flake	1
N500 E507.5	Quartzite Angular Debris	2
	Quartzite Flake	3
	Ridge and Valley Chert Flake	1
N425 E530	Ridge and Valley Chert Flake	1
N470 E537.5	Medium Sand Tempered Eroded Decorated Body Sherd	1
	Medium Sand Tempered Plain Body Sherd	1
	Quartzite Angular Debris	2
	Quartzite Flake-Fragment	1
N410 E537.5	Quartz Angular Debris	2
<b>Total</b>		<b>38</b>

Two 1x1-meter test units were excavated at site 31BN1036 with the goals of documenting local stratigraphic information, determining the potential for the site to contain intact buried features, and collecting additional artifacts. Technicians excavated Test Unit 1 in an area of anomalous soil at N500 E506. This test unit was dug in 10-centimeter levels within natural strata. Levels were measured from the ground surface, and all excavated soils were screened through 0.25-inch hardware cloth. Collected artifacts were also bagged by level.

Nine levels were excavated in Test Unit 1, which uncovered four strata (Figure 15). Levels 1, 2, and 3 were excavated through Stratum I, a brown (7.5 YR 4/3) silty clay plow zone. Level 4 (30-44 cmbs) was inclusive of Stratum II. This stratum represented a zone of undisturbed A-horizon soil and was dark brown (7.5 YR 3/4) clayey silt that transitioned into Stratum III, a dark brown (7.5 YR 3/4) silty clay 40 centimeters below the ground surface. Stratum III was noticeably less compact than the upper strata and contained several cobble- and boulder-sized rocks (per the Wentworth Scale). This stratum was sampled with Levels 5, 6, and 7. Soils in Levels 8 and 9 (Stratum IV) were also more compact than Stratum II. This brown (7.5 YR 4/4) clay subsoil did not yield any artifacts, and excavation was terminated at 94 centimeters below ground surface (Table 2).

There were 15 quartz or quartzite lithic artifacts and six sherds collected from Stratum I (see Table 2). None of the sherds retained identifiable surface treatments, and the flake/flake fragments are temporally non-diagnostic. Although artifact density increased from Level 1 to Level 3, the small size and poor condition of the collected ceramics indicated that agricultural activity disturbed the uppermost 30 centimeters of the artifact deposit. Larger ceramic sherds and higher artifact frequencies were observed in the Stratum II undisturbed A-horizon.

Stratum II produced 21 lithic and ceramic artifacts. The artifact sample includes quartz, quartzite, and Ridge and Valley chert flake/flake fragments. One non-diagnostic quartz biface was also collected from this stratum. The two stamped sherds collected from the stratum possess two distinct temper types (Figure 16). The larger sherd has fine sand temper, and the smaller sherd has a coarse sand temper. Given the local precontact ceramic sequence, the fine sand-tempered sherd may be attributed to the Middle Woodland Connestee series.

There were 22 artifacts, including one medium sand-tempered brushed body sherd, collected from Stratum III. The Stratum III lithic assemblage includes quartz, quartzite, and Ridge and Valley chert flake/flake fragments, and quartz angular debris. None of these artifacts are temporally diagnostic. Artifact density diminished with depth, and Levels 8 and 9, in Stratum IV were culturally sterile.

Test Unit 1 revealed a plow zone (Stratum I) overlying a 14-centimeter band of undisturbed A-horizon soil (Stratum II). This zone had a comparatively higher artifact density and contained large ceramic fragments attributable to a primary deposition context. Given the presence of rocks and loose compaction observed in Stratum III, the A-horizon may have developed atop a colluvial deposit. The few artifacts collected from Levels 5, 6, and 7 likely resulted from post-depositional processes, such as bioturbation. The presence of compact, sterile subsoil (Stratum IV) beneath this layer indicates the colluvium did not bury any earlier cultural components. Although no features were identified in the Test Unit 1 excavation, the presence of an undisturbed A-horizon indicates subsurface features may be preserved within this part of site 31BN1036.

Table 2. Artifacts Collected from Test Unit 1

Stratum	Level Number	Artifact Description	Count	
I	1 (0-10 cmbs)	Crystalline Quartz Flake-Fragment	1	
		Quartzite Flake-Fragment	1	
	<b>Level 1 Total</b>		<b>2</b>	
	2 (10-20 cmbs)	Medium Sand Tempered Plain Body Sherd	1	
		Quartz Angular Debris	4	
	<b>Level 2 Total</b>		<b>5</b>	
	3 (20-30 cmbs)	Sand Tempered Residual Sherd	2	
		Fine Sand Tempered Eroded Decorated Body Sherd	3	
		Quartz Flake	5	
		Quartz Flake-Fragment	3	
		Quartzite Flake-Fragment	1	
	<b>Level 3 Total</b>		<b>14</b>	
	<b>Stratum I Total</b>			<b>21</b>
	II	4 (30-44 cmbs)	Coarse Sand Tempered Unidentified Stamped Body Sherd	1
Fine Sand Tempered Unidentified Stamped (Oblique Overlapping) Body Sherd			1	
Quartz Biface			1	
Quartz Flake			1	
Quartz Flake-Fragment			5	
Quartzite Flake			6	
Quartzite Flake-Fragment			4	
Ridge and Valley Chert Flake			2	
<b>Stratum II (Level 4) Total</b>			<b>21</b>	
III	5 (44-54 cmbs)	Medium Sand Tempered Brushed Rim Sherd	1	
		Quartz Flake	4	
		Quartz Flake-Fragment	2	
		Quartzite Flake	3	
	<b>Level 5 Total</b>		<b>10</b>	
III	6 (54-64 cmbs)	Quartz Angular Debris	1	
		Quartz Flake	4	
		Quartz Flake-Fragment	1	
		Quartzite Flake	1	
		Quartzite Flake-Fragment	2	
	<b>Level 6 Total</b>		<b>9</b>	
	7 (64-74 cmbs)	Quartzite Flake	1	
		Ridge and Valley Chert Flake-Fragment	1	
<b>Level 7 Total</b>		<b>2</b>		
<b>Stratum III Total</b>			<b>22</b>	
IV	8 (74-84 cmbs)	N/A	0	
	9 (84-94 cmbs)	N/A	0	
<b>Stratum IV Total</b>			<b>0</b>	
<b>Test Unit 1 Total</b>			<b>63</b>	

Test Unit 2 was also excavated in an area of anomalous soil at N411 E515. This unit was placed 10 meters south of Clear Branch, near survey Shovel Test 122. The same excavation methods outlined for Test Unit 1 were employed for Test Unit 2. Six levels, divided among four strata, were excavated in Test Unit 2 (Figure 17). Levels 1, 2, and 3 were dug through a dark yellowish brown (10YR 3/4) silty loam plow zone (Stratum I) and very pale brown (10YR 8/2) sand lens. Stratum II was fully excavated in Level 4 (29-39 cmbs). This very dark brown (10YR 2/2) silt was very dense and contained a moderate amount of cobble- and boulder-sized fieldstone and thermally altered rock. Level 5 exposed Stratum III, a dark yellowish brown (10YR 4/4) clayey silt with markedly fewer rocks than Stratum II soil. The final stratum (IV) was composed of brown (7.5YR 4/3) silty clay subsoil mottled with reddish yellow (7.5YR 7.8) concretions and very dark gray (7.5YR 3/1) organic inclusions. The excavation was terminated at 60 centimeters below ground surface after Level 6 did not produce any artifacts.

Stratum I produced most of the artifacts (n=24) found in Test Unit 2, including non-diagnostic quartz flake/flake fragments or quartz angular debris (Table 3). Two non-diagnostic chert flakes and an unmodified stone were also collected, as well as two medium sand-tempered eroded body sherds and one coarse sand-tempered plain body sherd from the plow zone.

Although agricultural activity disturbed the upper portion of the artifact deposit, the undisturbed A-horizon soils present in Test Unit 2 and the proximity of Clear Branch suggests alluvial processes may have preserved precontact artifact deposits and features. Of the six artifacts collected from Stratum II, three were quartz flake/flake fragments or angular debris. Three medium sand-tempered eroded decoration body sherds collected from the stratum were not definitively identified to a precontact ceramic series, although paste characteristics are similar to the probable Connestee ceramics collected from shovel testing and Test Unit 1.

Two quartz flakes, a heat-treated Savannah River quartz stemmed biface, and two fine sand-tempered rim sherds were collected from Stratum III (39-49 cmbs). The presence of the Savannah River projectile point/knife indicates people also occupied site 31BN1036 during the Middle or Late Archaic period (Purrrington 1983; Figure 18). Soil color and textural changes and an absence of artifacts terminated excavation 59 centimeters below the ground surface.

Test unit excavation and shovel testing demonstrate that site 31BN1036 is a large-sized precontact occupation with Middle-Late Archaic period and Woodland period diagnostic artifacts. Recovery of thermally altered rock and ceramics are evidence that intensive, possibly long-term, occupations occurred at the site. The presence of undisturbed A-horizon soils (Stratum II) beneath the plow zone (Stratum I) indicates site 31BN1036 retains integrity and has a high potential for the presence of intact subsurface features. Given this potential, site 31BN1036 is recommended eligible for the NRHP under Criterion D, as the site could yield data significant to Middle Woodland period (perhaps Connestee phase) studies in the upper reaches of the Broad River watershed. This precontact site is not associated with any notable individuals or broad historical patterns and is recommended not eligible under Criterion A, B, or C.

Table 3. Artifacts Collected from Test Unit 2

Stratum	Level Number	Artifact Description	Count
I	1 (0-10 cmbs)	Medium Sand Tempered Eroded Body Sherd	1
		Chert-Unidentified Flake	1
		Quartz Angular Debris	3
		Quartz Flake	2
		Quartzite Flake	4
	<b>Level 1 Total</b>		<b>11</b>
	2 (10-20 cmbs)	Coarse Sand Tempered Plain Body Sherd	1
		Medium Sand Tempered Eroded Body Sherd	1
		Quartz Angular Debris	1
		Quartz Flake	2
	<b>Level 2 Total</b>		<b>5</b>
	3 (20-29 cmbs)	Quartz Angular Debris	1
		Quartz Flake	1
		Quartzite Flake	4
		Ridge and Valley Chert Flake-Fragment	1
Unmodified Stone		1	
<b>Level 3 Total</b>		<b>8</b>	
<b>Stratum I Total</b>			<b>24</b>
II	4 (29-39 cmbs)	Medium Sand Tempered Eroded Decorated Body Sherd	3
		Quartz Angular Debris	1
		Quartz Flake	1
		Quartzite Flake	1
	<b>Level 4 Total</b>		<b>6</b>
<b>Stratum II Total</b>			<b>6</b>
III	5 (39-49 cmbs)	Fine Sand Tempered Plain Rim Sherd	2
		Quartzite Biface-Hafted	1
		Quartzite Flake	2
	<b>Level 5 Total</b>		<b>5</b>
<b>Stratum III Total</b>			<b>5</b>
IV	6 (49-59 cmbs)	N/A	0
<b>Stratum IV Total</b>			<b>0</b>
<b>Test Unit 2 Total</b>			<b>35</b>

Potential research questions that might be addressed with archaeological datasets include, but are not limited to:

- What is the site's depositional setting? What natural and cultural processes were responsible for site formation?
- Are features present? If so, what types? What information can these provide on the site occupants?
- What is the relationship between the Late Archaic and Middle Woodland occupations? Are there any differences in occupation type/activities/intensity between these components? Are additional precontact components present that have yet to be identified?

- How does the Middle Woodland (Connestee) occupation compare to other sites in the region?
- What is the nature of lithic technology/organization? Are there detectable differences between the two occupations?
- Is there any evidence for intact houses or house patterns?
- Is there evidence for seasonal occupation?
- Is the site located along a known travel corridor?
- Does the site contain datasets such as pollen/phytoliths, zooarchaeological remains, and ethnobotanical specimens? Is there evidence for harvesting/collecting wild resources or possibly early domesticates?

Preservation through avoidance is recommended. If the proposed bridge replacement project cannot avoid direct impacts to the site, a data recovery plan may be necessary.

### **31BN1037**

Site 31BN1037 was located 70 meters south of the Havens Creek Road intersection with NC 9 (see Figure 1). This site was in a low-lying area near the western bank of Clear Branch Creek. During the survey, a hardwood canopy and moderate-density scrub vegetation extended over this area (Figure 19).

Three 7.5-meter interval delineation shovel tests were excavated in a cruciform pattern surrounding the positive test (Figure 20). Proximity to Clear Branch and steep slopes prevented testing to the east of Shovel Test 521. The excavated test locations revealed 50 centimeters of brown (7.5YR 4/3) loamy silt overlying reddish yellow (7.5YR 7/8) clay (Figure 21). These soils likely resulted from alluvial deposition, based on their texture and proximity to the stream. A 15-meter diameter site boundary was established after none of the delineation tests produced artifacts.

A single quartz flake fragment was collected from site 31BN1037. This temporally non-diagnostic artifact was recovered from an alluvial stratum, which indicates the site lacks integrity and research potential. Absent context, site 31BN1037 cannot be associated with any broad historical patterns or significant individuals. New South recommends site 31BN1037 not eligible for the NRHP under Criterion A, B, C, or D. No further work is recommended for this site.

### **1973 Duplex**

During the survey, a series of concrete block footings were identified near the southeastern corner of the APE (see Figure 1; Figure 22). These features were located on the opposite bank of the Broad River from NC 9. A neighboring landowner stated that these footings were constructed in 1973 for an uncompleted duplex residence/resort. This statement was supported by an aluminum beer can and a steel soda can stamped with anti-littering messages “Please Don’t Litter” and “Pitch In!” discarded within the concrete block voids (see Figure 22; Figure 23). These footings were not recorded as an archaeological site or evaluated for NRHP eligibility given the neighbor’s

statement and documentation showing the United States Brewing Association initiated the “Pitch In!” campaign 47 years ago (1971) (NAPSA n.d.).

### **Summary of Findings**

New South technicians excavated 235 survey and delineation shovel tests in the Bridge 79 APE. These efforts resulted in the identification of four precontact and historic sites. Sites 31BN1034, 31BN1035, and 31BN1037 are recommended not eligible for the NRHP. No further work is recommended for these three sites. Site 31BN1036, a Middle Woodland artifact scatter with an undisturbed A-horizon and a high potential for the presence of intact features, is recommended eligible for the NRHP. Preservation through avoidance is advised for site 31BN1036. If avoidance is not possible, additional testing and data collection in the area of direct effect may be necessary.

New South Associates, Inc.  
James Stewart  
Archaeologist

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United States Geological Survey (USGS)

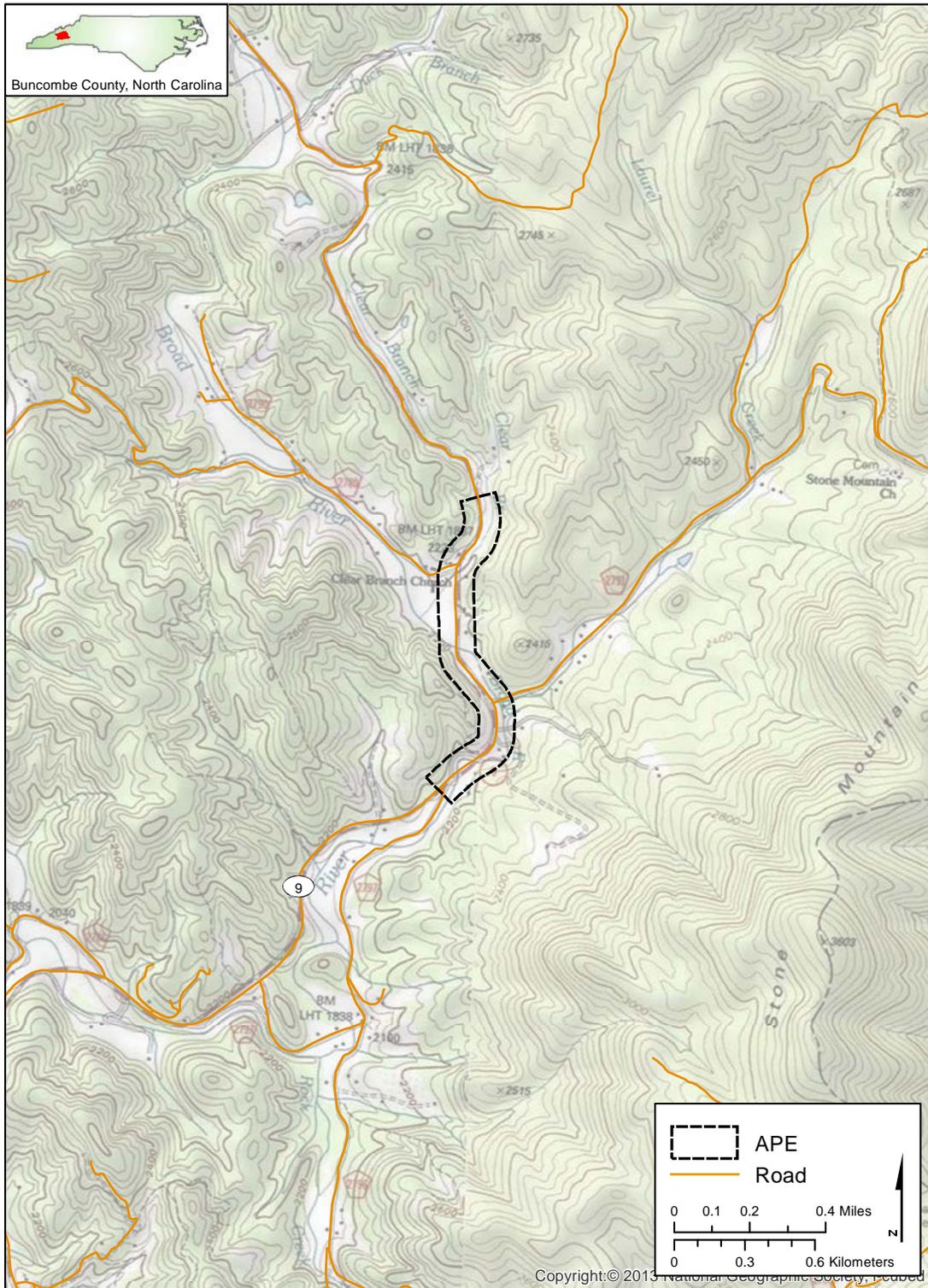
1979 Black Mountain, North Carolina 7.5 minute quadrangle map.

1983 Moffitt Hill, North Carolina 7.5 minute quadrangle map.

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Figure 1. Bridge 79 APE in Buncombe County



Sources: USGS Topographic Quadrangle Maps, Black Mountain, NC (1979) and Moffitt Hill, NC (1983)

Figure 2. Current Conditions in the Bridge 79 APE



A) The Intersection of NC 9 and Old Fort Road, Facing West

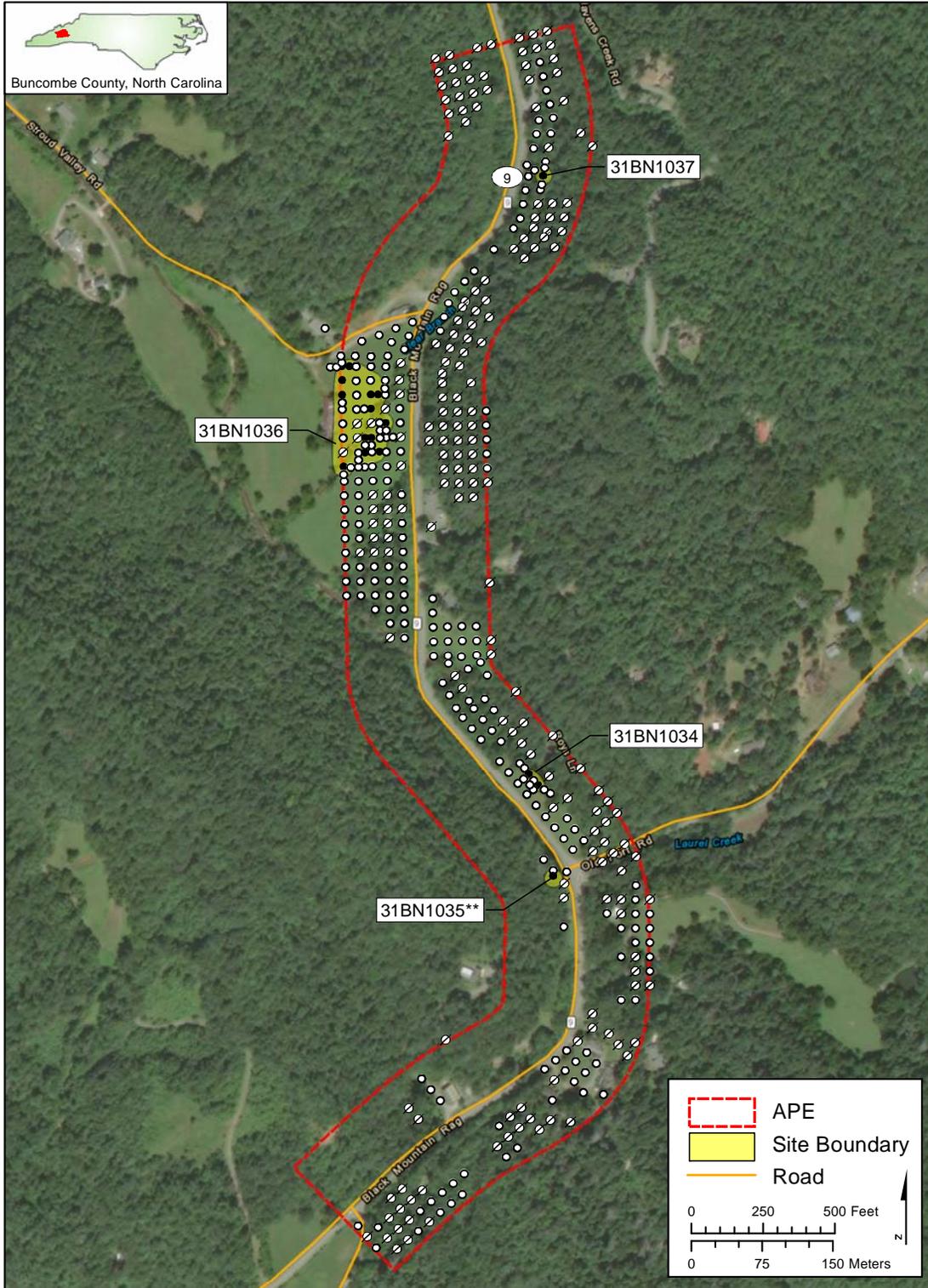


B) Bridge 79 Over the Broad River, Facing North



C) The NC 9 and Havens Creek Road Intersection

Figure 3. Pre-Plotted Shovel Test Locations

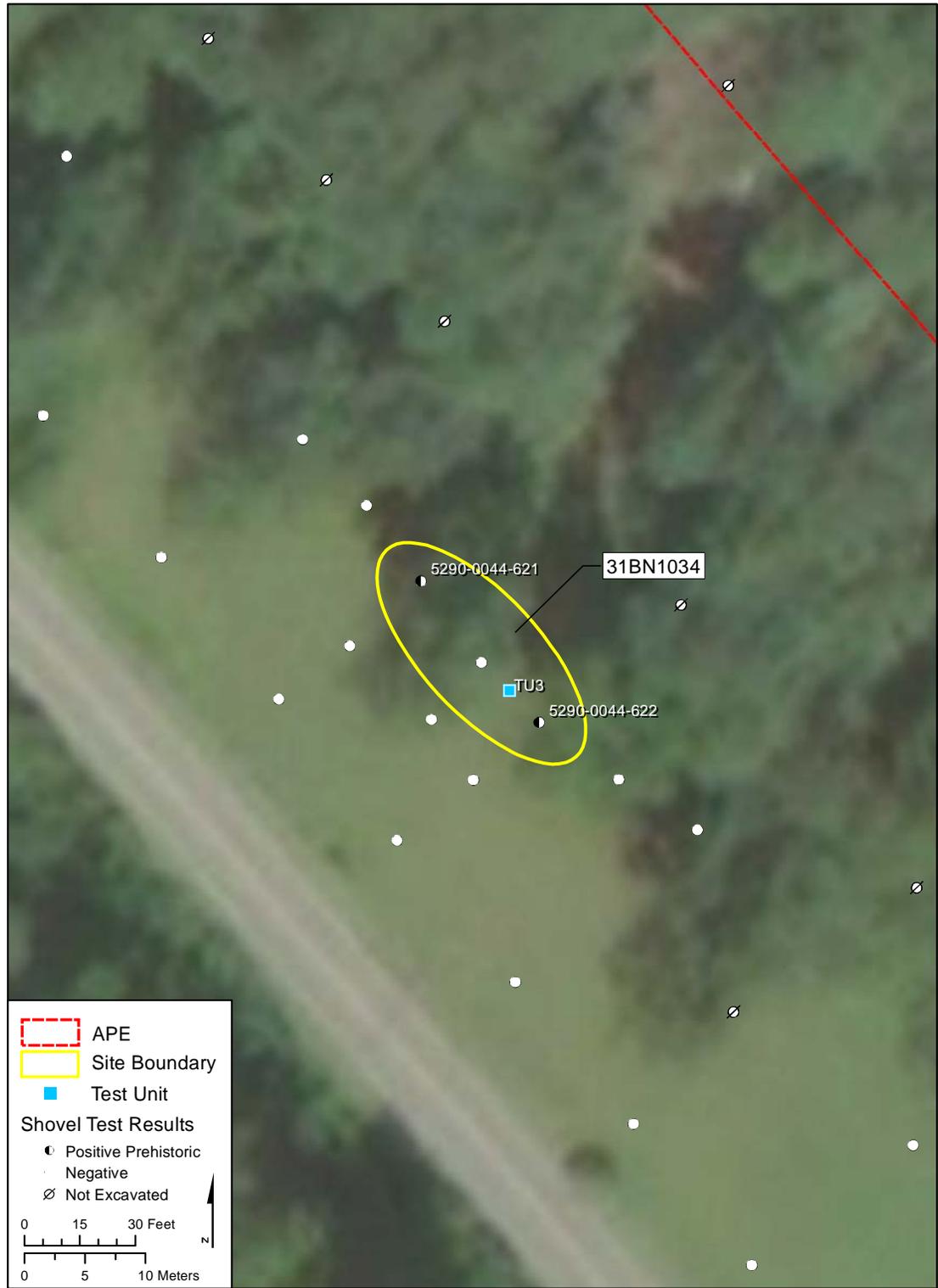


Sources: ESRI World Imagery (2018)

*Figure 4. Site 31BN1034 Setting*



Figure 5. Map of Site 31BN1034



Sources: ESRI World Imagery (2018)

Figure 6. Site 31BN1034 Shovel Test Profile Photograph



Figure 7. Test Unit 3 at Site 31BN1034, East Profile Sketch and Photograph

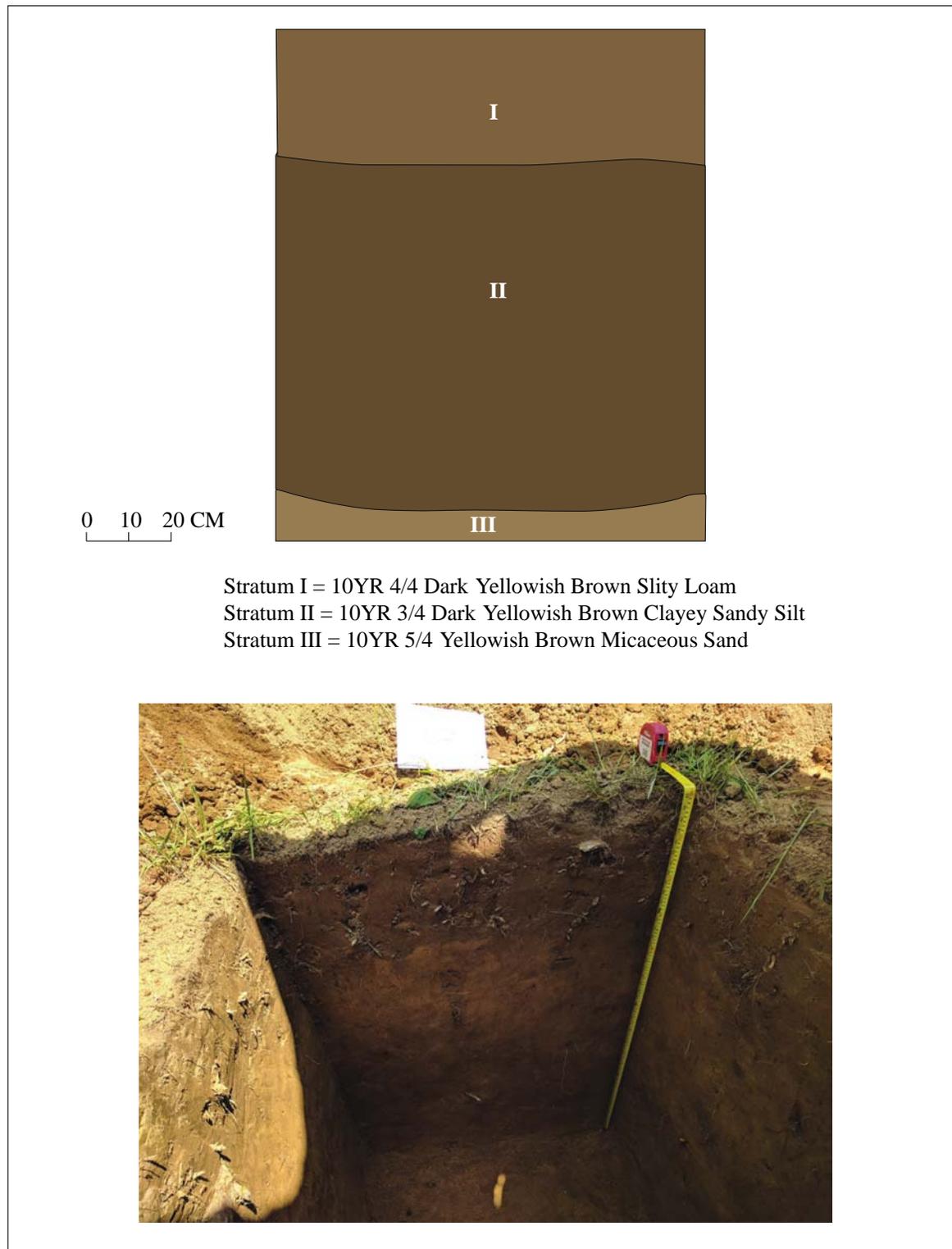


Figure 8. Site 31BN1035 Setting



Figure 9. Chimney at Site 31BN1035



C. Facing West



B. Facing South



A. Facing East

Figure 10. Map of Site 31BN1035



Sources: ESRI World Imagery (2018)

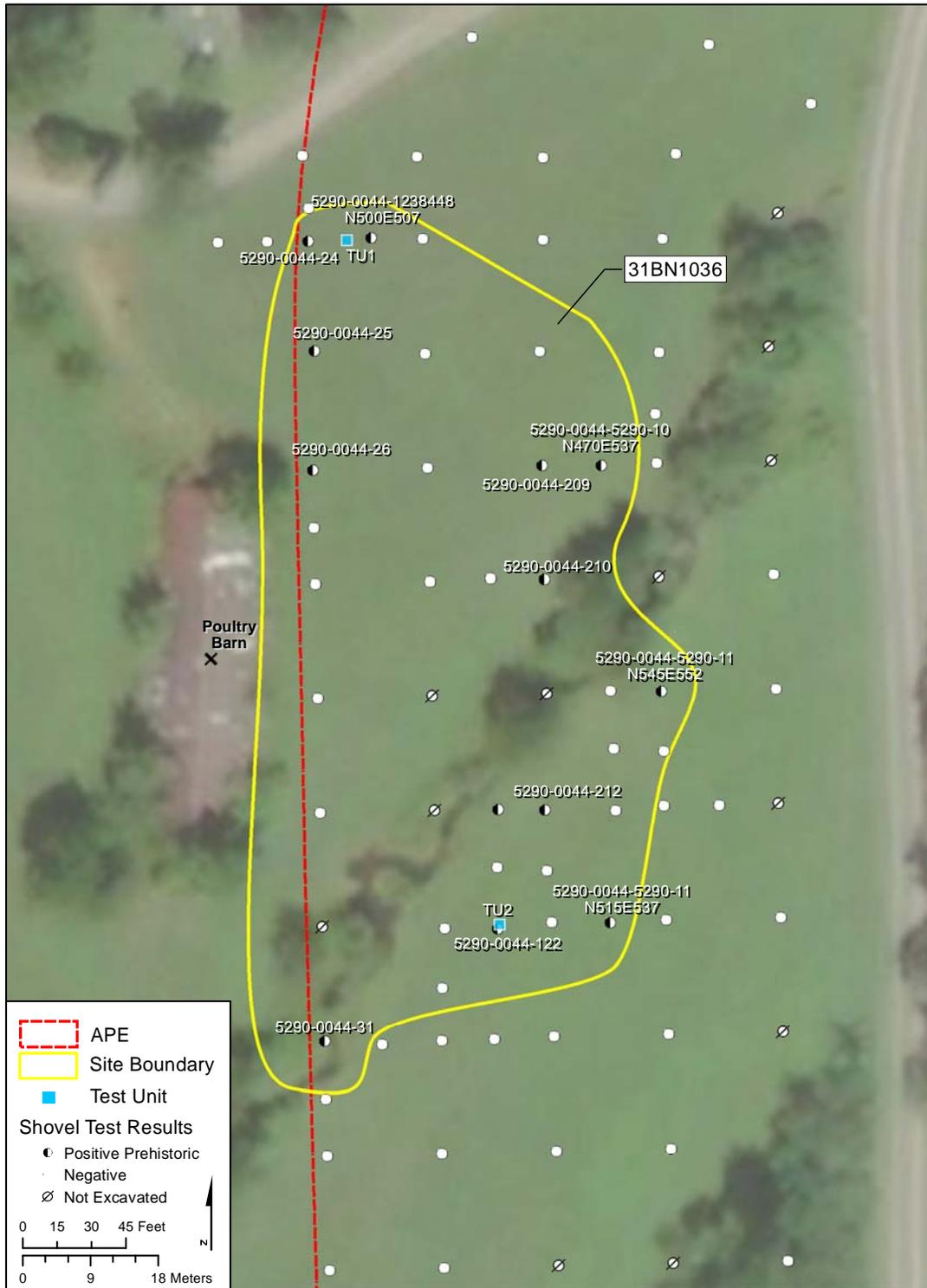
Figure 11. Site 31BN1035 Shovel Test Profile Photograph



*Figure 12. Site 31BN1036 Setting*



Figure 13. Map of Site 31BN1036



Sources: ESRI World Imagery (2018)

Figure 14. Site 31BN1036 Shovel Test Profile Photograph



Figure 15. Test Unit 1 at Site 31BN1036, North Profile Sketch and Photograph

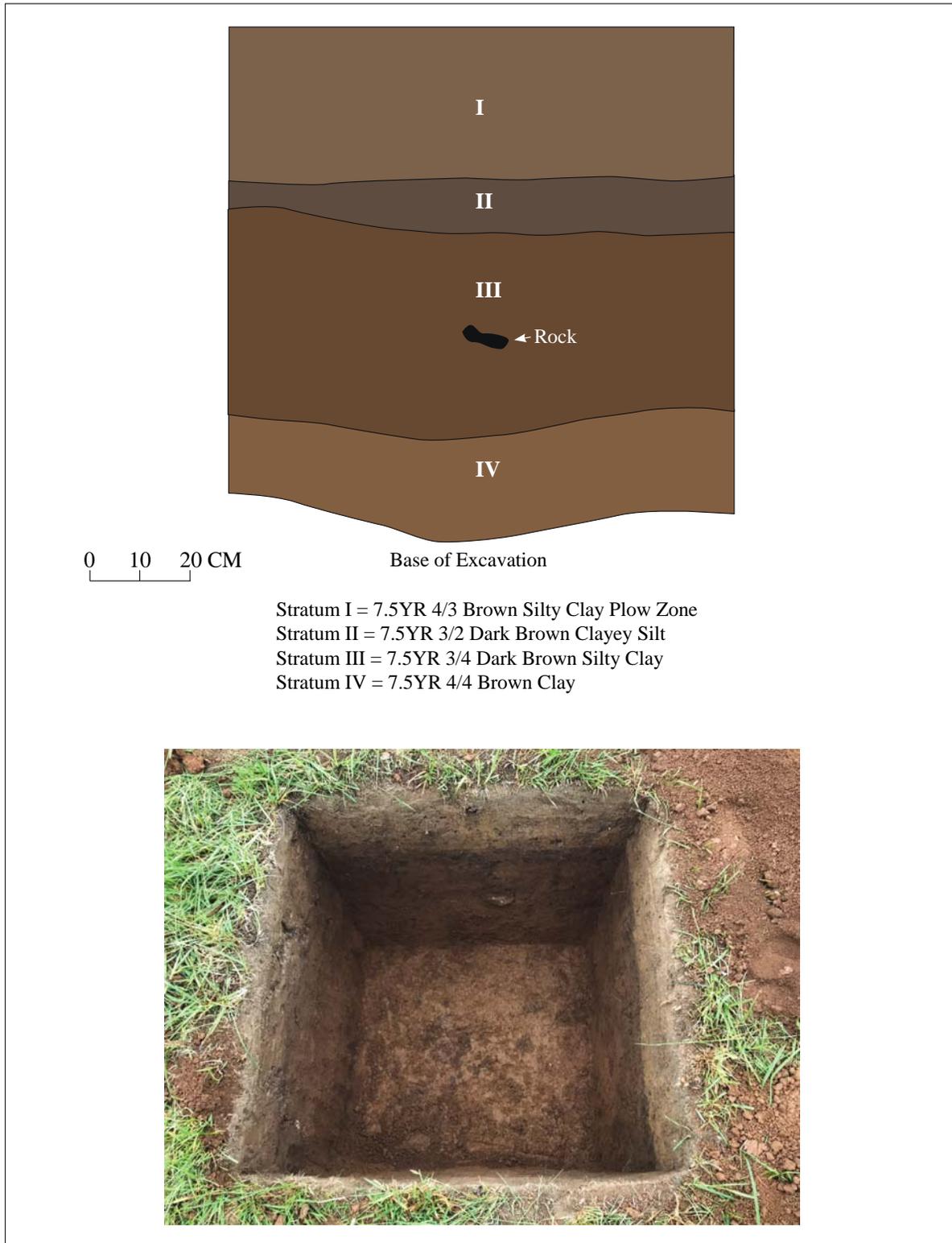


Figure 16. Ceramics Collected from Test Unit 1, Level 4



Figure 17. Test Unit 2 at Site 31BN1036, North Profile Sketch and Photograph

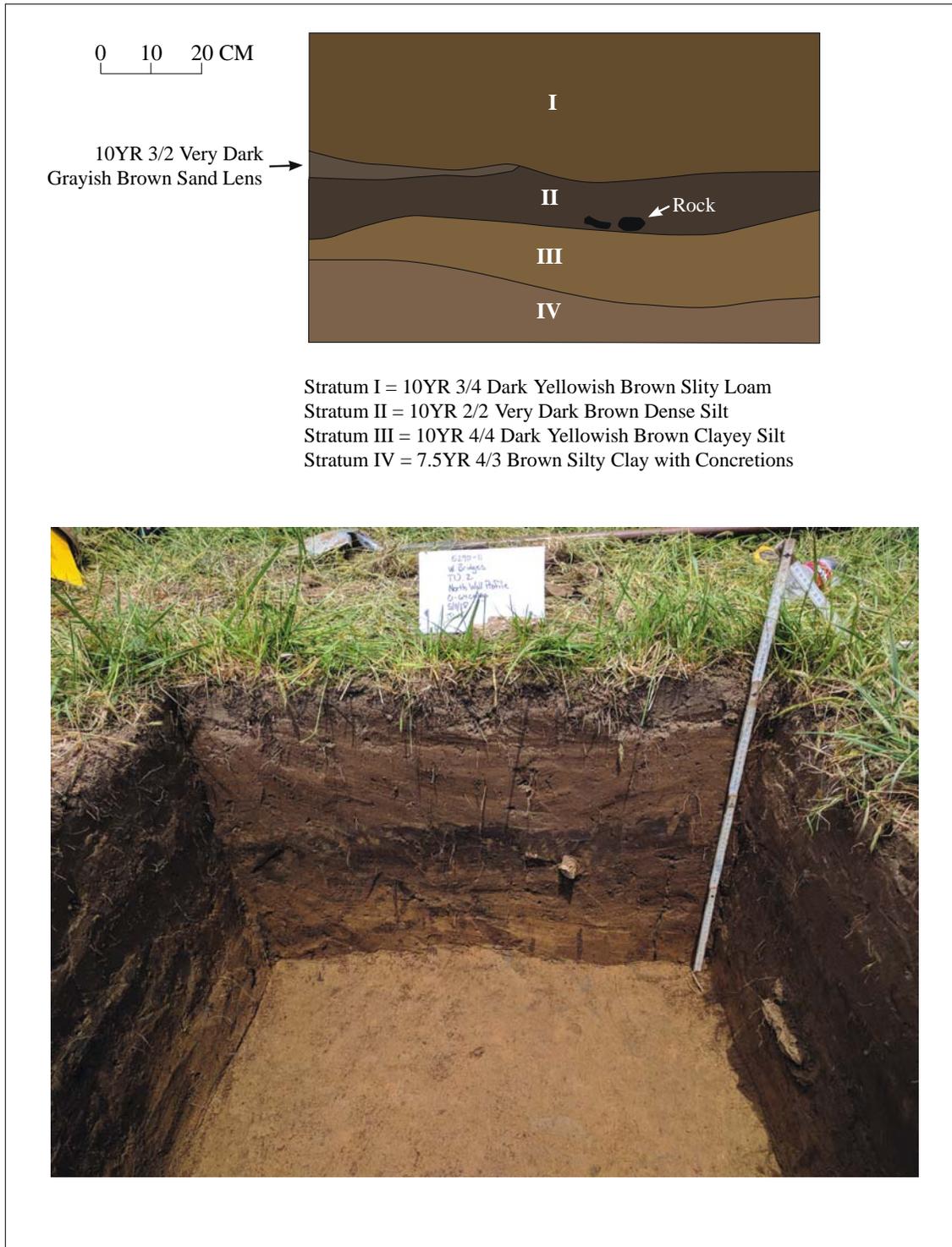


Figure 18. Savannah River Stemmed Point Collected from Test Unit 2, Level 5



*Figure 19. Site 31CN1037 Setting*



Figure 20. Map of Site 31CN1037



Sources: ESRI World Imagery (2018)

Figure 21. Site 31CN1037 Shovel Test Profile Photograph



Figure 22. Partially Demolished Building Constructed in the Early 1970s



A) Concrete Block Corner



B) Cans Located Within the Block Wall

Figure 23. Cans Located Within the Block Wall



A) Aluminum and Steel Cans Recovered from Inside the Wall



B) Can Tops Showing Stamps

APPENDIX A

**TIP BR-0009**  
**REPLACE BRIDGE NO. 100079 OVER BROAD RIVER ON NC 9**

INCOMPLETE PLANS  
DO NOT USE FOR R/W ACQUISITION

DOCUMENT NOT CONSIDERED FINAL  
UNLESS ALL SIGNATURES COMPLETED

**ATCS**  
421 FAYETTEVILLE STREET, SUITE 1100  
RALEIGH, NORTH CAROLINA 27601  
919.341.9418 [WWW.ATCSLLC.COM](http://www.atcsllc.com)  
ENGINEERING | PLANNING | SURVEYING | ENVIRONMENTAL

100' 0' 100'  
ENGLISH



Plan sheet showing avoidance of site 31BN1036 with the proposed replacement of Bridge 79 in Buncombe County.